

In re Gulack

No. 82-580

Decided Mar. 30, 1983

## PATENTS

## 1. Patentability — Anticipation — In general (§51.201)

## Patentability — Invention — In general (§51.501)

## Patentability — Subject matter for patent monopoly — Printed matter (§51.611)

Differences between invention and prior art cited against it cannot be ignored merely because those differences reside in content of printed matter; "printed matter rejection" under Section 103 stands on questionable legal and logical footing, standing alone, description of element of invention as printed matter tells nothing about differences between invention and prior art or about whether that invention was suggested by prior art; printed matter rejection is based on case law antedating 1952 Patent Act, employing point of novelty approach; 1952 Act legislatively revised that approach through its requirement that claim be viewed as whole in determining obviousness; under Section 103, Board of Appeals cannot dissec claim, excise printed matter from it, and declare remaining portion of mutilated claim to be unpatentable; claim must read as whole.

## 2. Patentability — Anticipation — In general (§51.201)

## Patentability — Invention — In general (§51.501)

## Patentability — Subject matter for patent monopoly — Printed matter (§51.611)

Printed matter that is not functionally related to substrate does not distinguish invention from prior art in terms of patentability, although printed matter must be considered in that situation it may not be entitled to patentable weight.

## 3. Patentability — Anticipation — In general (§51.201)

## Patentability — Invention — In general (§51.501)

## Patentability — Subject matter for patent monopoly — Printed matter (§51.611)

Functional relationship between printed matter and substrate of precise type found in *In re Miller*, 164 USPQ 46, — to size or type of substrate, or conveying information about substrate — is not required; what is required is existence of differences between appealed claims and prior art sufficient to establish patentability; bare presence or absence of specific functional relationship, without further analysis, is not dispositive of obviousness; rather, critical question is whether there exists any new and unobvious functional relationship between printed matter and substrate.

## Particular patents — Mathematical Device

Gulack, Educational and Recreational Mathematical Device in the Form of a Band, Ring or Concentric Rings, rejection of claims 1-4 and 6 reversed.

Appeal from Patent and Trademark Office Board of Appeals.

Application for patent of Max A. Gulack, Serial No. 935,183, filed Aug. 18, 1978. From decision rejecting claims 1-4 and 6, applicant appeals. Reversed; Friedman, Circuit Judge, dissenting with opinion.

C. Bruce Hamburg, New York, N.Y., for appellant.

John W. Dewhurst (Joseph F. Nakamura and Fred E. McKelvey, on the brief) for U.S. Patent and Trademark Office.

Before Friedman, Baldwin, and Smith, Circuit Judges.

Smith, Circuit Judge.

This is an appeal from the decision of the U.S. Patent and Trademark Office Board of Appeals sustaining the rejection under 35 U.S.C. §103 of claims 1-4 and 6 of application serial No. 93,183, filed August 18, 1978, entitled "Educational and Recreational Mathematical Device in the Form of a Band, Ring or Concentric Rings." We reverse.

## I.

The stated object of the disclosed invention is to exploit certain arithmetic properties of all prime numbers larger than 5,  $P$ ,<sup>1</sup> to create the semblance of magic or to educate

<sup>1</sup> The variable P is defined in the specification as any prime number (in integer not divisible without remainder by any number except itself and unity) greater than 5. Fig. 7, ll. 11-13, etc.

## A.

The physical configuration of the invention is extremely simple. The appealed claims recite three key elements: (1) a *band*, ring, or set of concentric rings; (2) a plurality of individual digits imprinted on the band or ring at regularly spaced intervals; and (3) an endless loop of paper, fabric, or plastic material. Specific embodiments of the invention set forth in the specification and appealed claims include a belt, haberdashery, skullcap border, necklace, ring, table edge, household device or utensil, jewelry, and other artifacts.

The digits are integers, generated by the algorithm, and displayed at equal intervals on the outer surface of the band.

The algorithm for generating  $Q$ , the sequence of digits imprinted on the band, is also set forth in the specification.

A row of  $P-1$  nines is always divisible by  $P$  to give a quotient  $Q$  which is an integral number.

Whenever a smaller number of nines is divisible by  $P$  to give an integral quotient  $Q$ , the number will always consist of some integral fractional part of  $P-1$  nines, which may be designated as  $P-1/n$  in which  $n$  is an integer greater than 1.

\* \* \*

\* \* \* It will be found that the number of digits in the quotient  $Q$  will always be  $P-1$  or some integral fraction of  $P-1$ . \* \* \*

The specification describes three qualities of the sequence of digits  $Q$ , subject to manipulation for recreational or educational purposes. First, the digits have a "cyclic" nature. Second, the number of digits in

the prime  $P$  will fix the maximum number of digits appearing in sequence in  $Q$ . For example,

[II]  $P = 2$  digits,  $Q$  or any multiple of  $Q$ , or cyclic variation of  $Q$ , if reduced to the original number of digits as aforesaid, will never contain any sequence of any 2 digits more than once. \* \* \*

Finally, the digits of  $Q$  are subject to manipulation in accordance with procedures set forth in the specification to produce a series of nines.

Appellant recommends the 180 digit quotient  $Q$  (derived from  $P = 181$ ), because its length is sufficient to lend mystical qualities to the manipulation of the band yet short enough to be readily imprinted on the band. The MAGIC RING OF HAYIM, constructed in accordance with the appealed claims, is capable of manipulation as set forth in the specification to perform magic tricks or to display various aspects of number theory.

The appealed claims read as follows:

1. An educational and recreational mathematical device comprising at least one band which is endless or adapted to have ends thereof fastened to form an endless band and a plurality of individual digits imprinted on the band at regularly spaced intervals, the digits when all read consecutively clockwise as a number constituting a quotient obtained by dividing a number constituted of  $P-1/n$  nines, in which  $P$  is a prime number greater than 5 and  $n$  is an integer at least 1, by  $P$  and adding to the left-hand end of said quotient any number of zeros necessary to increase the number of digits in said quotient to  $P-1/n$ ,  $n$  being so selected that  $P-1/n$  nines is the minimum number of nines divisible by  $P$  so that said quotient is an integral [sic] number.

2. Device according to claim 1, in which said band is endless.

3. Device according to claim 1, in which said band comprises an article of apparel.

4. Device according to claim 3, in which said band is part of a hat or cap.

5. Device according to claim 1 in which said band is an article of jewelry.

## B.

The examiner rejected claims 1-4 and 6 on two grounds: as not directed to statutory subject matter, 35 U.S.C. §101; and as unpatentable over Witcoff, 35 U.S.C. §103. The

(P-1)  $\div n = 6$ , where  $n = 2$ , and  $P = 13$ .)

<sup>4</sup>To simplistically illustrate this cyclic feature:

If  $P = 7$ , then  $Q = 7$ ;  $7 \div 7 = 1$ ;  $1 \times 7 = 7$ ;  $7 \div 7 = 1$ ;  $1 \times 7 = 7$ ;  $7 \div 7 = 1$ ;  $1 \times 7 = 7$ .

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board reversed the section 101 rejection, finding that the claims define an article of manufacture covered by 35 U.S.C. §101.

In his section 103 rejection, the examiner stated that the appealed claims differed from Witcoff only in the specific digits printed on the band. The examiner found no relationship between appellant's digits and band except that the band is the surface on which the digits are printed. The examiner cited In Re Miller,<sup>5</sup> for the proposition that "[m]ere printed matter can not impart a patentable feature to a claim." Applying Parker v. Flook,<sup>6</sup> the examiner viewed applicant's dig-

its as well known and unable, therefore, to define over Witcoff.

In affirming the 103 rejection, the board found no meaningful relationship between the digits and the band of the type indicated by the court in Miller.

Unlike the fact situation in Miller, the printed indicia claimed herein [convey] no meaningful information in regard to the substrate [they are] arranged on, [do] not require any size relationship of the substrate, and [do] not require any particular substrate to effectively convey the information. We are convinced that there is no meaningful functional relationship between appellant's indicia and the claimed endless band.

\* \* \* In our opinion, the endless loop formed by the haberdashery with numerical digits printed thereon is the same structure claimed by appellant and the sole difference is in the content of the printed material. Accordingly, there being no functional relationship of the printed material to the substrate, as we have noted above, there is no reason[sic] to give patentable weight to the content of the printed matter which, by itself, is non-statutory subject matter.

<sup>5</sup>In re Royka, 490 F.2d at 985, 180 USPQ at 583, the CCPA, 383 U.S. 1, 148 USPQ 459 (1966). The CCPA has considered *all* of the limitations in the claims including the printed matter limitations, in determining whether the invention would have been obvious. See In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); In re Caviglio, 451 F.2d 1091, 172 USPQ 121 (CCPA 1971). In Royka, 490 F.2d at 985, 180 USPQ at 583, the CCPA, notably weary of reiterating this point, clearly stated that printed matter may well constitute structural limitations upon which patentability can be predicated.

<sup>6</sup>35 U.S.C. §103 (1976) specifically provides that: "A patent may not be obtained \* \* \* if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. \* \* \* (Emphasis supplied.)

See Graham, 333 U.S. 1, 148 USPQ 459; Flook, 437 U.S. at 594 n.16, 198 USPQ at 199 n.16 (noting the §103 requirement of reading claims as a whole and extending that requirement to §101).

<sup>7</sup>In re Miller, 418 F.2d 1392, 164 USPQ 46 (CCPA 1969).

<sup>8</sup>Parker v. Flook, 437 U.S. 584, 198 USPQ 193 (1978).

The examiner rejected claims 1-4 and 6 on two grounds: as not directed to statutory subject matter, 35 U.S.C. §101; and as unpatentable over Witcoff, 35 U.S.C. §103. The

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basic principle of claim interpretation, we must reverse the rejection as a matter of law.

[2] If, instead, the board sought only to construe and apply Miller within the context of a section 103 rejection, we find no error in the board's articulation of the law. Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability.<sup>10</sup> Although the printed matter must be considered, in that situation it may not be entitled to patentable weight. Thus, apparently, was the board's conclusion with respect to Gulack's invention.

However, because we find that the digits of Gulack's invention are functionally related to the band, and because Witcoff fails to disclose or suggest the subject matter recited in the appealed claims, considered as a whole, we reverse.

The sole issue is whether the board correctly affirmed the rejection of the appealed claims as obvious in view of Witcoff under 35 U.S.C. §103.

## II.

The board, responding to appellant's arguments based on In re Miller,<sup>11</sup> found no functional relationship of the type present in Miller.

### A.

Miller involved an appeal from the board's affirmation of the rejection of claims drawn to a measuring device for use in fractioning recipes. No statutory ground for the rejection was specified. The rejection in Miller was on the basis that the invention lacked "the required cooperative structural relationship necessary before the printed matter can be given patentable weight."<sup>12</sup>

The CCPA<sup>13</sup> responded, stating:

[i]t seems to us that what is significant here is not structural but *functional* relationship \* \* \* \* \*

As for the examiner's characterization of the indicia and legend as "unpatentable printed matter," we note that the examiner

himself recognizes the fact that printed matter, in an article of manufacture claim, can be given "patentable weight." He did so in allowing claims. His characterization of printed matter as "unpatentable" is beside the point; no attempt is here being made to patent printed matter as such. The fact that printed matter by itself is not patentable subject matter, because non-statutory, is no reason for ignoring it when the claim is directed to a combination. Here there is a new and unobvious functional relationship between a measuring *receptacle*, volumetric *indicia* thereon indicating volume in a certain ratio to actual volume, and a *legend* indicating the ratio, and in our judgment the appealed claims properly define this relationship. \*\*\* [Emphasis in original.]

The court found that the printed matter of Miller's invention was functionally related to the volume measuring device and reversed the rejection.

### B.

[3] Similarly, in examining Gulack's invention, we find that a functional relationship does exist between the printed matter and the substrate. A functional relationship of the precise type found by the CCPA in Miller—to size or to type of substrate, or conveying information about substrate—is not required. What is required is the existence of differences between the appealed claims and the prior art sufficient to establish patentability. The bare presence or absence of a specific functional relationship, without further analysis, is not dispositive of obviousness. Rather, the critical question is whether there exists any new and unobvious functional relationship between the printed matter and the substrate.<sup>14</sup> With these thoughts in mind we turn now to examine the obviousness of the appealed claims in light of the cited reference, Witcoff.

### III.

Appellant and the board agree that the sole difference between the appealed claims and Witcoff resides in the content of the printed matter. The board declined, however, to accord that printed matter patentable weight.

Witcoff discloses the application of printed matter to a band. The printed matter suggested by Witcoff is data that is to be committed to memory, such as addition, subtraction, multiplication, history dates, historical personages, and the like. The data items are independent, bearing no direct relation to the other data entries on Witcoff's band. The relationship of the Witcoff data to the band is for purposes of support and display. The data must be imprinted on the band so that the answer to the inquiry displayed on the outer surface of the band is visible when viewed from inside the hat through the aperture. Witcoff discloses an endless band, yet the areas of printed matter displayed on the Witcoff band are not arranged in any particular sequence.

The appealed claims, on the other hand, require a particular sequence of digits to be displayed on the outside surface of a band. These digits are related to the band in two ways: (1) the band supports the digits; and (2) there is an endless sequence of digits—each digit residing in a unique position with respect to every other digit in an endless loop. Thus, the digits exploit the endless nature of the band.

The differences between the appealed claims and Witcoff reside in appellant's particular sequence of digits Q, and in the derivation of that sequence of digits. These features are critical to the invention disclosed by the appealed claims. Witcoff neither discloses nor suggests either feature.

### IV.

We reject the board's conclusion that there is no functional relationship between the printed matter and the substrate of the appealed claims. Such a relationship does exist and it is different from the relationship exhibited by the corresponding elements of the Witcoff reference. We find no suggestion in the cited reference of appellant's particular sequence of digits Q or of the derivation of that sequence.

*Reversed.*

Friedman, Circuit Judge, dissenting.

I would affirm the Board's decision sustaining the rejection of the claimed invention as obvious under section 103.

The appellant's primary claim is for "[a]n educational and recreational mathematical device," namely, an endless band upon which are imprinted numbers in a particular sequence derived from the application of an algorithm. Subordinate claims describe the band as an article of apparel, part of a hat or cap, or an article of jewelry.

The algorithm is not patentable and "is treated as though it were a familiar part of

<sup>10</sup> Miller, 418 F.2d 1392, 164 USPQ 46.

<sup>11</sup> Id.

<sup>12</sup> Id at 1395, 164 USPQ at 48.

<sup>13</sup> The holdings of the United States Court of Customs and Patent Appeals and of the United States Court of Claims were adopted as precedent in the Court of Appeals for the Federal Circuit in South Corp. v. United States, 690 F.2d 1368, 1370, 215 USPQ 657, 658 (Fed. Cir. 1982).

<sup>14</sup> Miller, 418 F.2d at 1396, 164 USPQ at 48-

the prior art." Parker v. Flook, 437 U.S. 592 (1978). Similarly, the particular numbers produced by an abstract solution of the algorithm cannot themselves be claimed, although the practical application of those numbers may be patentable. See In re Meyer, 688 F.2d 789, 215 USPQ 193 (CCPA 1982); In re Abele, 684 F.2d 902, 214 USPQ 682 (CCPA 1982). The issue under section 103 is whether, to one of ordinary skill in the art of developing algorithms and applying their product for educational or recreational purposes, it would have been obvious to apply the algorithm by displaying the result of its solution on a continuous band, as the appellant disclosed in his patent application. The Board correctly answered that question affirmatively.

The Witcoff patent teaches the use of a hatband to display numbers as an "educational or game-playing device." Although there are differences between the display of numbers in appellant's invention and their display in Witcoff, it would have been obvious from Witcoff for one of ordinary skill in the art who wanted to use the numbers the algorithm produced for appellant's purposes, to place them on a continuous band. Indeed, one of the appellant's subordinate claims displays the numbers on a hat or cap.

The display of the numbers on a band or other object that permits them to be shown in a series without a particular beginning or end would have been obvious even without Witcoff. The numbers can be used for the recreational and educational purposes the appellant claims merely by arranging them in a continuous series. They do not need to be placed on an "endless band" as the appellant claimed. In fact, at oral argument the appellant conceded that the same result his invention accomplishes also could be accomplished by placing the numbers in a continuous series upon a cube or other shape, or even by writing them in a circle upon a flat surface. The precise nature of the object on which the numbers are placed is thus of little importance. The only matter that is of significance—the arrangement of the numbers as a continuous series—would have been obvious to anyone of ordinary skill in the art who knew the algorithm.

In In re Miller, 418 F.2d 1392, 164 USPQ 46 (CCPA 1969), as the court points out, the court determined that there was "a new and unobvious functional relationship" between the measuring receptacles and the descriptions and legends on them. In the present case, unlike Miller, I do not think that the "functional relationship" between the num-

algorithm and their display upon the continuous band was new and unobvious.

Ronald S. Rosen, Los Angeles, Calif., for defendants.

Before Anderson, Pregerson, and Nelson, Circuit Judges.

Anderson, Circuit Judge.

## Court of Appeals, Ninth Circuit

Jason v. Fonda, et al.

No. 81-5973

Decided Feb. 8, 1983

## COPYRIGHTS

### 1. Infringement — Evidence of (§24.05)

Evidence showing no more than "bare possibility" that alleged infringers had access to author's work is insufficient to create issue of material fact.

### 2. Infringement — Evidence of (§24.205)

Even assuming alleged infringers had access to author's work, infringement is not established if there is no substantial similarity between two works.

### 3. Pleading and practice in courts — Dismissal of suit (§53.33)

It is proper to dismiss pendent state claims when federal claim is dismissed prior to trial.

Appeal from District Court for Central District of California, Kelleher, J.; 217 USPQ 231. Action by Sonya Jason, against Jane Fonda, Bruce Gilbert, Jerome Hellman, JPL Production, Inc., United Artists Corporation, National Broadcasting Company, Inc., Nancy Dowd, Robert C. Jones, and Waldo Salt, for copyright infringement, unfair competition, misappropriation, and breach of implied contract. From order granting summary judgment for defendants, plaintiff appeals. Affirmed.

Sonya Jason brought an action against Jane Fonda and eight other defendants for copyright infringement, unfair competition, misappropriation, and breach of implied contract. Mrs. Jason's primary allegation was that the defendants' motion picture, *Coming Home*, infringed on the copyright in her novel, *Concomitant Soldier* — Woman and War. The district court granted the defendants' motion for summary judgment and dismissed the other claims. We affirm.

[§2.3] Our review of the facts and issues leads us to concur in the well-reasoned decision of Judge Kelleher filed September 21, 1981, 526 F.Supp. 774, 217 USPQ 231 (C.D. Cal. 1982). We therefore incorporate his memorandum of decision by reference.

Judge Kelleher aptly points out:

(1) Mrs. Jason presented evidence showing no more than a "bare possibility" the defendants has access to her work. Such a showing is insufficient to create a genuine issue of material fact. See British Airways Board v. Boeing Company, 585 F.2d 946, 952 (9th Cir. 1978), cert. denied, 440 U.S. 981 (1979);

(2) Even assuming access, there was no substantial similarity between the two works under the standards announced by this court in *Sid & Marty Marty Television Productions, Inc. v. McDonald's Corp.*, 562 F.2d 1157, 196 USPQ 97 (9th Cir. 1977); and

(3) It is proper to dismiss pendent state claims when the federal claim is dismissed prior to trial. *Wham-O Mfg. Co. v. Paradise Manufacturing Co.*, 327 F.2d 748, 753, 140 USPQ 357, 361-362 (9th Cir. 1964); see also, *Wren v. Sletten Construction Co.*, 654 F.2d 529, 536 (9th Cir. 1981).

Additionally, Judge Kelleher did not abuse his discretion in handling discovery nor in denying Mrs. Jason's motion for reconsideration.

The appellants' request for sanctions and attorney's fees is denied. Single costs are allowed.

The judgment of the district court is

Decided Nov. 18, 1982  
Ronald S. Rosen, Los Angeles, Calif., for defendants.

## UNFAIR COMPLETION

### 1. Miscellaneous cases (§68.65)

California law permits recovery for unauthorized use of one's likeness or name for commercial purposes; however, no action under this theory will lie solely for publication which is protected by First Amendment.

### 3. Miscellaneous cases (§68.65)

Constitutional protection extends to truthful use of public figure's name and likeness in advertising which is merely adjunct of protected publication and promotes only protected publication.

### 4. Miscellaneous cases (§68.65)

Advertising to promote news medium is not actionable under appropriation of publicity theory so long as advertising does not falsely claim that public figure endorses that news medium.

### 5. Miscellaneous cases (§68.65)

Magazine is entitled to use public figure's picture and to refer to her truthfully in subscription advertising for purpose of indicating content of publication in which she was interviewed; such usage is protected by First Amendment.

### 6. Miscellaneous cases (§68.65)

Magazine that falsely claims in its advertisements that celebrity told it things she would never tell rival magazine, when in fact she had intended to give interview to rival magazine, and had not told anything to magazine that published it, is not protected by First Amendment.

### 7. Miscellaneous cases (§68.65)

First Amendment does not protect magazine that published, with knowledge that they were false or in reckless disregard for their truth.

Company that owns 80% of stock of magazine, and that participated in preparation of advertisements which appeared in magazine participated sufficiently in false advertising, magazine to share magazine's liability to public figure whose celebrity value was exploited by the advertisements.

### 8. Accounting — Parties liable (§11.45)

#### Miscellaneous cases (§68.65)

Magazine that wrongfully appropriated celebrity's right of publicity by using false advertising and promotional misrepresentation that exploited celebrity's publicity value liable to celebrity for general, special, an exemplary damages.

### 9. Accounting — Damages — Trademark and unfair competition (§11.258)

Action by Cher, against Forum International, Ltd., doing business as Forum Magazine, Penhouse International, Ltd., New Group Publications, Inc., doing business as the Star, and Fred Robbins, for breach of contract, unfair competition, misappropriation of name and likeness, misappropriation of right to publicity, and violations of Lanham Act. From order granting judgment for plaintiff, defendants appeal. Affirmed in part modified in part, and reversed in part.

Appeal from District Court for Central District of California; Real, J., 213 USPQ 96.

Action by Cher, against Forum International, Ltd., doing business as Forum Magazine, Penhouse International, Ltd., New Group Publications, Inc., doing business as the Star, and Fred Robbins, for breach of contract, unfair competition, misappropriation of name and likeness, misappropriation of right to publicity, and violations of Lanham Act. From order granting judgment for plaintiff, defendants appeal. Affirmed in part modified in part, and reversed in part.

John D. Forbes, and Rubin, Perlstein & Chieffo, both of Beverly Hills, Calif., for plaintiff.

Douglas C. Conroy, and Paul, Hastings, Jarofsky & Walker, both of Los Angeles, Calif., and Roy Grutman, and Grutman & Miller, both of New York, N.Y., for Forum International Ltd. and Fred Robbins

truth, advertisements which implied that celebrity endorsed magazine; therefore, magazine is liable to celebrity for wrongfully appropriating her right of publicity.